DOCUMENT RESUME

ED 098 283 UD 014 637

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TITLE School Entry Age and Future Adjustment of Inner City Children.
PUB DATE 74
NOTE 13p.

EDRS PRICE MF-$0.75 HC-$1.50 PLUS POSTAGE
DESCRIPTORS *Adjustment Problems; *Admission (School); *Behavior Problems; Classroom Environment; *Disadvantaged Youth; *Kindergarten Children; Measurement Techniques; Sex Differences
IDENTIFIERS Peterson and Quay Behavior Problem Checklist

ABSTRACT

Randomly selected fourth grade teachers completed the Peterson and Quay Behavior Problem Checklist on 304 inner city children classified according to their age at entry into kindergarten. Findings revealed that earlier entry age children (children who were comparatively young when they started school) scored highest on the conduct subtest of the Behavior Problem Checklist, indicating more behavior problems; average entry age children scored second highest; and, children in the later entry age the lowest. These indicate higher behavior problem scores among earlier entry age children. Comparisons which reached statistical significance were between earlier entry age and later entry age groups on the conduct subtest, and between sexes on the conduct and inadequacy-immaturity subtests, with males manifesting more problems than females. (Author/RJ)

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Findings revealed that earlier entry age children (children who were comparatively young when they started school) scored highest on the conduct subtest of the Behavior Problem Checklist, indicating more behavior problems; average entry age children scored second highest; and children in the later entry age group generally the lowest, indicating the least behavior problems of the three entry age groups.

These findings indicate higher behavior problem scores among earlier entry age children. Comparisons which reached statistical significance were between earlier entry age and later entry age groups on the conduct subtest ($p < .01$), and between sexes on the conduct ($p < .001$) and inadequacy-immaturity ($p < .001$) subtests, with males manifesting more problems than females.

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What is the relationship between a child's age when he enters kindergarten, and his later adjustment? Over the past years, a plethora of studies of varying statistical soundness have generated contradictory evidence indicating, in some instances, satisfactory adjustment, and in other instances, unsatisfactory adjustment of the child who enters kindergarten at a young age compared to his classmates.

Curriculum development, instructional methodology, and teacher training will justifiably continue to absorb the interest and energies of special educators in their attempts to enhance the growth of children in both affective and cognitive domains. However, if through basic administrative considerations such as those concerning the age at which a child begins school, we can significantly alter his chances for school success, then we must fully investigate those considerations and attempt to base our policies as much as possible upon objective evidence.

The age at which a child enters school is usually determined by his date of birth, resulting in age differences of up to one year in any given class (Educational Research Service, 1968). Entry age policies are based on a combination of local custom, and the mixed evidence on the relationship between entry age and adjustment and achievement variables as reported in the literature (Sowards, 1969).

Several studies (e.g., Gott, 1964; King, 1955) indicate that the child entering school at a comparatively early age has more adjustment difficulties than his older peers. However, most studies in the literature attempt to quantify the adjustment variable on the basis of either informal commentary or the most rudimentary of measurement instruments. The present study attempts to provide for improved quantification of the adjustment variable through the use of a carefully constructed behavior rating scale.

No study reviewed in the literature has attempted systematically to determine the relevance of the entry age variable to the adjustment of children in an inner city population.

METHOD

Subjects

In an effort to establish any differences in the adjustment of inner city children grouped by school entry age and by sex, data was gathered on 304 subjects from a large urban New England school district. Sixteen elementary schools within that district have 50% or more low income enrollment, and thus are eligible for ESEA Title I. Subjects in the current study were boys and girls from the 16 ESEA Title I schools.

Using a table of random numbers, 44 classrooms were selected from among the fourth grades in the above mentioned 16 schools. Data was collected on 108 earlier entry (4/7-4/8 at kindergarten entry), 92 average entry (5/0-5/1 at kindergarten entry), and 104 later entry (5/5-5/6 at kindergarten entry) children.

Data Collection

The cumulative records of children from the randomly selected classrooms were reviewed to determine (1) if the child began kindergarten in the school system; (2) if his date of birth qualified him as an earlier entry (EE), average entry (AE), or later entry (LE) child, as defined above; and (3) if he was from a home where English was the primary language. The cumulative

records of children who met conditions (1), (2), and (3) were then further examined, and the following data record d: school; teacher; name; sex; date of birth. Rec d was also made of each child's percentile scores on t Reading Aptitude Tests (Monroe, 1963) as administered during the spring of the child's kindergarten year.

After the records were reviewed and the subject children identified, their teachers were supplied with a copy of the Behavior Problem Checklist (Peterson and Quay, 1967) for each of the subject children, along with brief instructions for its use.

Statistical Treatment of Data

Simple analysis of variance was used to determine if differences existed among the three entry age groups in ability as measured by the Reading Aptitude Tests. No significant differences were found among entry age groups on reading readiness factors as measured by the Monroe at the end of kindergarten.

Weighted scores on the three main factors of the Behavior Problem Checklist (conduct disorder, personality disorder, and inadequacy-immaturity) were determined for each of the subjects by multiplying

the teacher's response to an item (0, 1, or 2) by the factor loading for that item. Two-way analys of variance was computed to explore differences among entry age groups and between sexes on the Behavior Problem Checklist subscores.

RESULTS

Table 1 presents analysis of variance data by entry age and sex on the Peterson and Quay conduct subtests. Significant differences exist among entry age groups ($p > .05$) and between sexes ($p > .001$).

Insert Table 1 about here.

Mean differences were such that the EE group scored the highest, the AE group the second highest, and the LE group scored the lowest on the conduct subtests. Tukey's Critical Difference in Means (CDM) formula was used for post-comparisons wherever F was significant. As indicated in Table 2, differences between EE and AE groups, and between AE and LE groups were not significant, but the difference between EE and LE groups was significant at the .01 level, indicating more conduct problems among the earlier entry age children.

Insert Table 2 about here.

Table 1

Entry Age by Sex Analysis of Variance
on Peterson & Quay Conduct Subtest (Total Population)

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	P
Entry Age	131.5179	2		2.99	<.05
Sex	384.6893	1		17.50	<.001
Interaction	10.0303	2		0.23	n.s.
Within	5824.3503	265	21.98		

Table 2

Post-Comparisons of Entry Age Groups
on Peterson & Quay Conduct Subtest (Total Population)

	N	Mean	P
EE	94	4.98	n.s.
AE	81	4.22	
EE	94	4.98	<.01
LE	96	3.06	
AE	81	4.22	n.s.
LE	96	3.06	

Mean differences among entry age groups and between sexes were slight and nonsignificant on the personality subtest. No significant differences were found among entry age groups on the inadequacy-immaturity subtests, but highly significant differences ($p > .001$) existed between the sexes, with males scoring higher.

DISCUSSION

Concern over the optimum time for a child to begin his school experiences has been expressed through the large number of research projects on this subject. In most school districts, legal requirements for entry into kindergarten are based upon chronological age alone. This age limit is in turn based, in most cases, on a combination of local custom and the mixed evidence on the effect of entry age on adjustment and achievement reported in the literature.

The present study grouped inner city fourth grade boys and girls by their age at entry into kindergarten, and investigated differences among the groups on adjustment variables as measured by the Peterson and Quay Behavior Problem Checklist.

Many writers (e.g., Ausubel, 1957; Ilg & Ames, 1965) indicate that females generally begin their school experience more adequately prepared than boys both

socially and neurologically. Consequently, differences between males and females were to be expected. Differences were generally as anticipated, with males exhibiting higher behavior problem scores than females.

Differences among entry age groups on the dependent variables were likewise anticipated. Although evidence from the literature is mixed, the preponderance of evidence indicates poorer adjustment for the earlier entry age child (Evans, 1974).

Implications for administrators of inner city schools are manifest. It has long been part of the folklore of the teacher's room that less mature boys often get off to a bad start in school, and sometimes never get back on course. Yet we need not rely on folklore. Ames (1968), Ausubel (1963), and Lerner (1971) have all stated that premature initiation of the formal school experience may be of mixed results.

Ausubel (1963) states,

> ...when a pupil is prematurely exposed to a learning task before he is ready for it, he not only fails to learn the task in question but even learns from the experience of failure to fear, dislike, and avoid it. (p.71)

How often is such a process occurring in the inner city schools? The present study indicates that fourth

grade boys who were younger when they entered kindergarten are manifesting significantly more conduct problems than their peers. School entry age appears to be a significant variable in the adjustment of inner city children, and we would be wise to focus our attention upon creation of school admission age policies which take this fact into consideration.

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